



# Commonwealth of Virginia

## “HOW VOLUNTEER DATA IS USED TO MEET TMDL GOALS”

October 12, 2007



# BACKGROUND



**WHERE WE ARE**



**WHERE ARE WE  
GOING**



# PARTNERSHIPS





# Identifying Impaired Waters

## 305(b) and 303(d) WATER QUALITY REPORTS



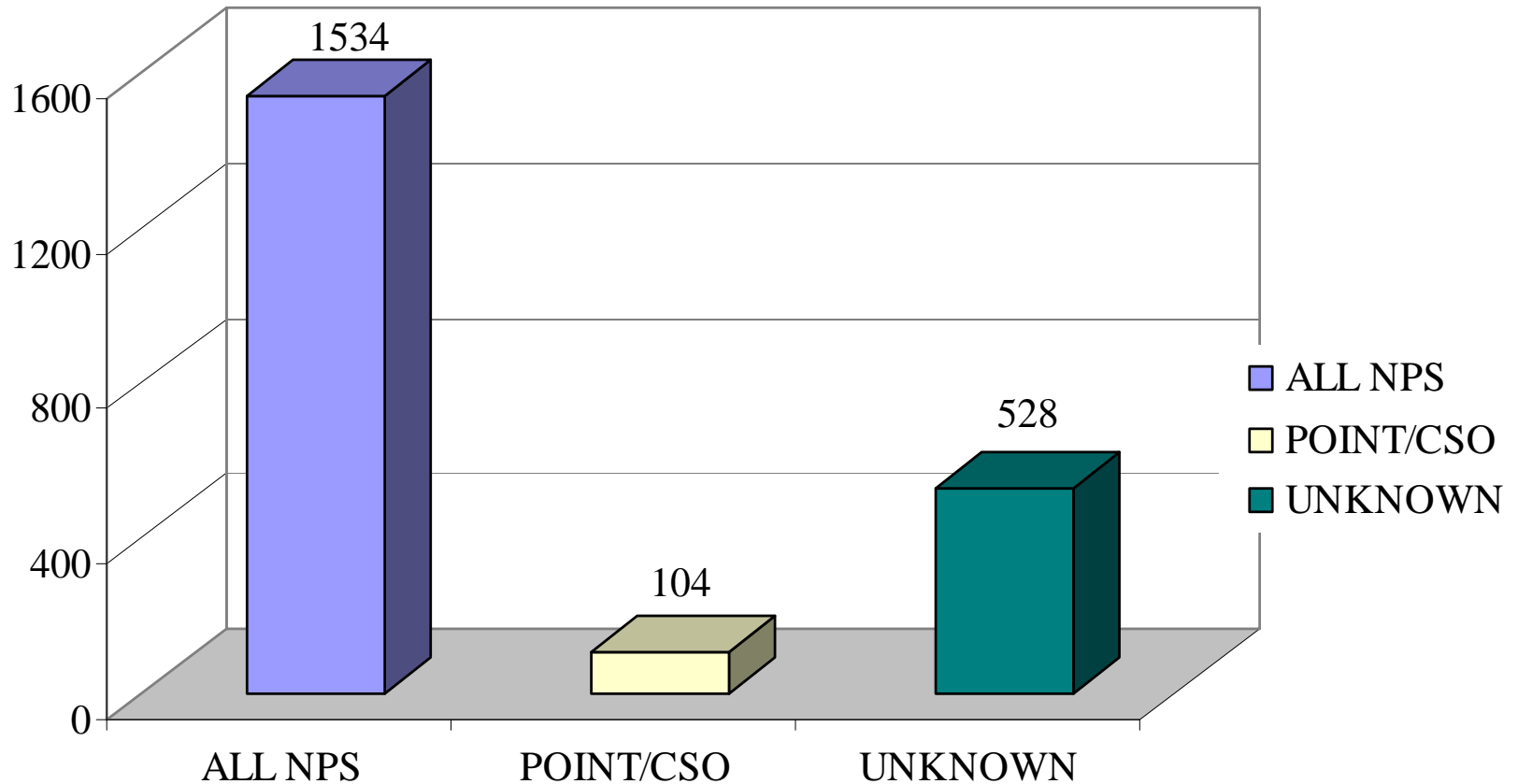
# **TMDL Process**

## **“Total Daily Maximum Load”**

- Monitoring & Assessment
- 303(d) Impaired Waters List
- TMDLs (clean-up plans)
  - quantify pollutant reductions
- TMDL Implementation Plan
  - design strategy
- Implementation of Strategy

# 1998 Impairment Sources

## Nonpoint Source, Point Source, and Unknown



# *How is a TMDL done?*

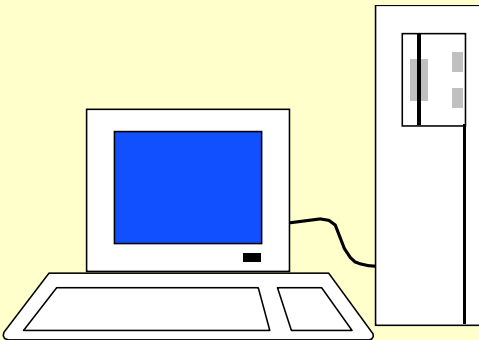


## *(Pollution Budget)*

### **A Special Study to:**

- Identify all sources of pollution contributing to violations
- Calculate the amount of pollutants entering the stream from each source.

– Calculate the reductions  
in pollutants, by source-*Must*  
*include MOS*



# **Magnitude of Task** **Federal Consent Decree**

- 1998 303(d) List
  - 670 TMDLs completed by 2010
    - 410 on free flowing streams
    - 260 shellfish TMDLS
    - Additional 1200 listing since 1998

# **Consent Decree Schedule**

## **Total TMDLs - 670**

- **TMDLs - 410**

- 1999 1
- 2000 13
- 2002 30
- 2004 83
- 2006 91
- 2008 96
- 2010 97

- **Shellfish - 260**

- 130
- 39
- 91

## **Current Status**

- 360 TMDLs complete (CD & non-CD)
- 200 TMDLs scheduled by May '08
- 60 IPs complete
- 47 IPs scheduled by May'08
- starting on 2010 segments

## **Implementation - What**

- **TMDLs establish reduction goals for pollutants by source**
- **First stage in implementation is development of Implementation Plan (under 10% violation rate)**
- **Implementation Plans provide details of BMPs and corrective actions**

# *Stakeholder Involvement in the* *CLEANUP PROCESS*

- **CRITICAL** for success!

# ***Citizen Monitoring Partnerships***

## ***Provide Data for...***

- **Impairment listing or de-listing**
- **Source Identification for TMDL Development**
- **Follow-up Monitoring for IPs**
- **Indication of Potential Impairments**
- **Promote Education and enhance Out-Reach**

# *Common Types Of Water Quality Data Important To DEQ*

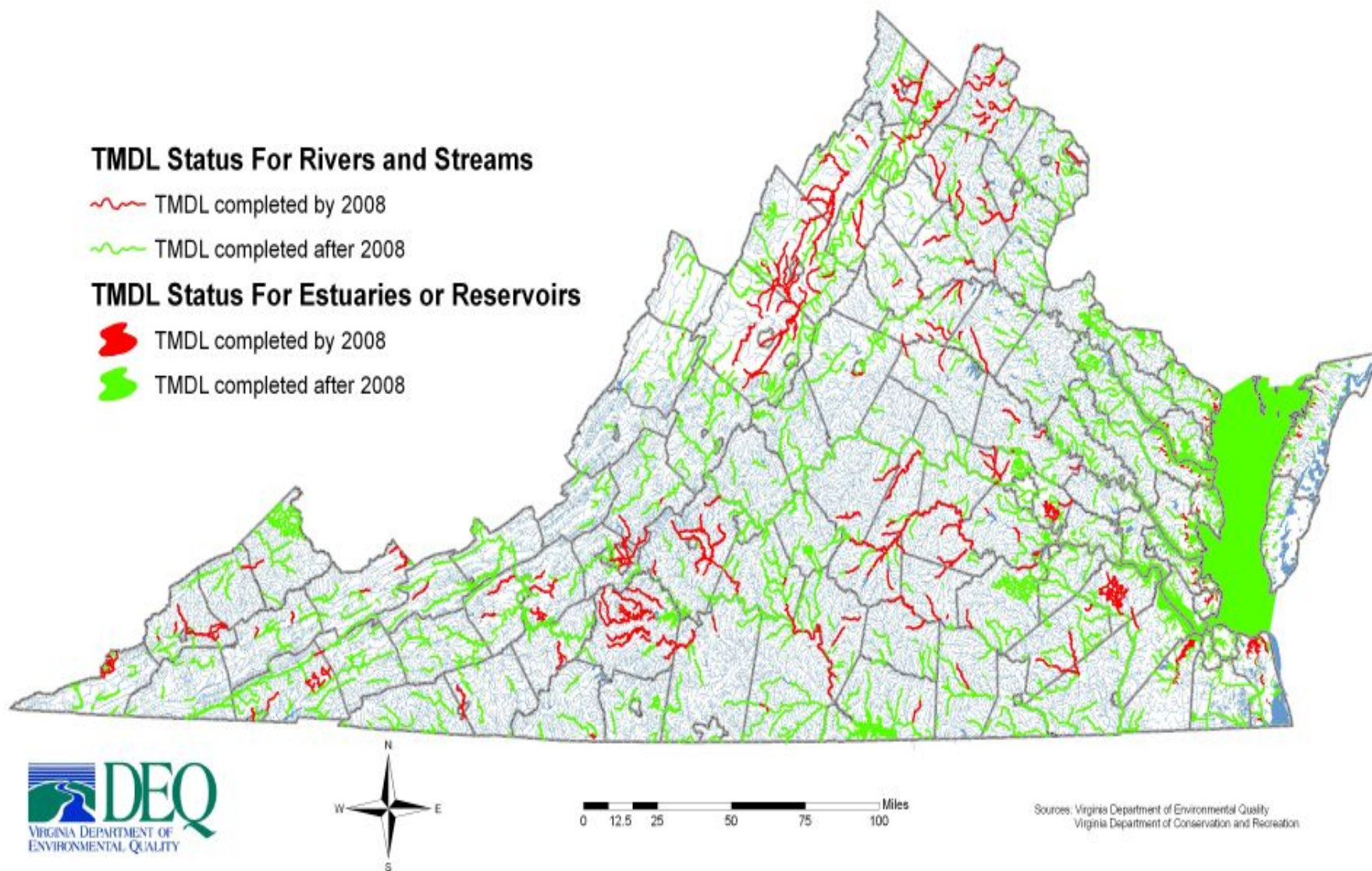


Save Our Streams sampling

- Chemical
  - pH
  - Dissolved Oxygen
- Biological
  - Benthic Macroinvertebrates
  - E. coli
- Physical
  - Temperature
  - Salinity

**TMDLs and IPs  
may be coming to a  
watershed near you!**

# TMDL Completion Status In Virginia Waters



# *OPPORTUNITY KNOCKS!- with limited, if not dwindling resources.....*



## *Piedmont Region*

- E.coli coliscan data is being used in the James bacteria TMDL (in progress): Reedy Creek, Richmond City, and Walls Run/Powell Creek.
- Additional data would be helpful in the Appomattox tributaries IP (underway)

## *Valley Region*

- Bacteria data collected by Friends of Page County: Mill Creek and Hawksbill Creek TMDLs & IPs-used for watershed characterization and model verification and validation
- Benthic data collected by StreamWatch: used in the stressor analysis for Rivanna TMDL

## *Tidewater Region*

- Bacteria data collected by Friends of the Powhatan Creek: watershed characterization (additional stations farther up beyond DEQ Stations)

## *South Central Region*

- Collected data from Clean VA Waterways, has been helpful assessing additional impaired segments
- Future data collection will be useful to track IP progress in the Appomattox Basin!

## *Northern Region*

- Loudoun Watershed Watch and Loudoun Wildlife Conservancy monitoring Catoctin Creek IP-12 stations
- John Marshall SWCD monitoring Thumb Run, Great Run, Carter Run and Deep Run IP Progress-10 stations
- Friends of Four Mile Run currently monitoring IP progress-10 stations

# ***Volunteer Monitoring-can help!:***

**Expand Statewide Monitoring Coverage-inputs to Assessment:**

identify **HOT SPOTS** or  
**COLD SPOTS**

**Provide a measuring stick for the Implementation Plan progress:**

measure **effectiveness of BMPs**

measure movement towards  
**Water Quality Attainment**

# *Healthy Virginia Streams*

